

respectively. CA-MRSA was highly resistant to β -lactams, levofloxacin, erythromycin and clindamycin, but susceptible to vancomycin, teicoplanin, linezolid, daptomycin, and trimethoprim/sulfamethoxazole. Prevalence of PVL in MSSA and CA-MRSA were 41.9% and 40.0%. Other toxins expressed similarly between them. Combined with MLST and *spa* typing, the major clones of MSSA were ST398-t034, ST7-t796, ST398-t571, ST1-t127, and ST188-t189, while in CA-MRSA were ST239-t037-SCCmec I, ST239-t632-SCCmec III, ST59-t437-SCCmec V, ST8-t008-SCCmec IV, and ST6-t701-NT.

Conclusions: This study indicated that the low prevalence of CA-MRSA in China and complexity of the genetic background in both MSSA and MRSA. CA-MRSA could acquire SCCmec IV in PVL+ MSSA and also be the consequential of dissemination from health care facilities or from other countries.

Poster Session – Bacterial Infections

PP-012 Cotrimoxazole resistant *Burkholderia pseudomallei* in neurological melioidosis

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We report a patient with cerebral melioidosis resistant to cotrimoxazole.

Case presentation: A 57-year old man, with type 2 diabetes presented with left scalp swelling of 3 months. CT brain showed subdural empyema at the left and temporal regions. Ultrasound abdomen showed multiple hypoechoic lesions in the spleen suggestive of abscesses.

He had craniectomy and drainage of three loculated abscesses on the same day. Dura tissue culture came back as *Burkholderia pseudomallei*, resistant to cotrimoxazole but sensitive to ceftazidime, doxycycline and amoxycillin/clavulanate. He completed 33 days of intravenous ceftazidime was discharged well with oral amoxycillin/clavulanate 625 mg twice a day and doxycycline 100mg twice a day for 6 months duration and is well 1 year after followup clinically and radiologically.

Cotrimoxazole has been traditionally used for the therapy of melioidosis despite results indicating resistance often produced in the disc diffusion test against *B. pseudomallei*. The difficulty experienced in interpreting the disc diffusion test results for cotrimoxazole for *B. pseudomallei* requires further clarification from the E test which was not available in this case. Although Augmentin has a poor brain penetration, in this case the patient has a successful outcome.

PP-013 Evaluating clinical findings in rabbit infected by *Salmonella typhimurium* and treated with aqueous garlic extract

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Background: One of important intestinal infections occurring particularly in developing countries is *salmonella* infection causing clinical signs & symptoms and in some extent, irreparable complications. One therapeutic method had been used since ancient time to relieve signs & symptoms is utilization of plant drugs. In this respect, effect of aqueous garlic extract on clinical findings manifested infected rabbits has been studied.

Methods: This study has been conducted by participating 3 groups each of included 20 Dutch-polish rabbits. Rabbits have been infected by 10¹¹ CFU *Salmonella typhimurium*. Then after contamination two treated groups have been

taken on therapy with 20 mg/kg and 40 mg/kg garlic extract 3 times daily. Clinical signs & symptoms including heart rate, temperature, diarrhea, weight alterations on the day before contamination, 24, 48, 72, 96, 168 hrs after treatment as daily routine manner determined.

Results: Clinical signs such as heart rate, temperature and diarrhea in 3 different groups as well as in various days in each group showed significant difference but did not show any significant differences in terms of weight.

Conclusion: Garlic is effective in accelerating improvement of clinical signs caused by infection with *Salmonella typhimurium*, and that necessitates complementary studies in form of clinical trials to prove this effect.

PP-014 Evaluation of in-vivo antibacterial effects of garlic aqueous extract on *Salmonella typhimurium*-infected Rabbits

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Background: *Salmonellosis* is one of the most common infections in under developed countries. Antibiotics used for management, may be led to not only drug-resistance, but also some serious complications. From remote times, medicinal plants have been used for treatment of diseases. Garlic is one of these agents with multiple effects; e.g. antibacterial effects.

Methods: Sixty rabbits of Dutch-polish race were divided in three equal groups; contamination without treatment in the first group, contamination with treatment by low-dose and high-dose of garlic aqueous extract in the other groups. All rabbits were infected by 10¹¹ CFU of *S. typhimurium*. Forty-eight hours after contamination, garlic aqueous extract was used in treated-groups with doses of 20 mg/kg and 40 mg/kg 3 times daily. Stool culture is performed at first before contamination and in 24, 48, 72, 96 and 168 hours after treatment.

Results: Bacterial colony count of stool shown significant statistical difference in different days. A significant difference is also seen in colony count of treated groups with non-treated group. But there is no definite difference in stool colony count of treated groups (low dose & high dose).

Conclusion: Garlic aqueous extract has antibacterial effects on *S. typhimurium*. Further studies are recommended for clinical usage of this antibacterial agent.

PP-015 Immunogenicity and protectivity of Bap subunit of *Acinetobacter baumannii*

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Background: *Acinetobacter baumannii* is a major nosocomial pathogen that causes severe infections. *A. baumannii* has remarkable capacity to acquire antimicrobial resistance that could be attributed to the ability of clinical strains to form biofilms. A specific cell surface protein named biofilm associated protein (Bap) was defined in a bloodstream isolate of *A. baumannii*. Bap directly involved in biofilm formation by *A. baumannii* and play a relevant role in bacterial infectious processes.

Methods: In the present study we cloned expressed and purified a 371 amino acid subunit of Bap. Recombinant Bap was used to immunize mice. Then immunized mice were challenged with *A. baumannii* to evaluate the immunogenicity and protectivity of Bap subunit. Humoral immune response to Bap was determined by ELISA.